REMARKS

Claims 1 – 55 remain in the present application.

Objections

Claims 5, 36, 44 and 45 are objected to because of informalities. Applicants have amended Claims 5, 44 and 45 to correct the informalities. Applicants have amended Claim 5 to read "analysis of destination". Applicants have amended Claim 44 to read "wherein if said". Applicants have amended Claim 45 to read "previously established". Applicants have amended Claim 36 to remove the duplicate period.

112 Rejections

Claims 49- 54 are rejected under 35 USC 112 as being indefinite. Applicants have amended Claim 49 to depend from Claim 48.

102 Rejections

Claims 1, 2, 10, 21, 22, 26, 27, 30 – 32, 37, 40, 41, 43 – 45 and 55 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent No. 6,611,519 to Howe. Applicants respectfully assert that the present invention as claimed in Claims, 2, 10, 21, 22, 26, 27, 30 – 32, 37,40, 41, 43 – 45 and 55 is neither shown nor suggested by the Howe reference.

With respect to Claims 1, 21, 31, 45 and 55 the present Office Action alleges the Howe reference teaches a processor for directing the switching circuit to perform cut through routing. Applicants respectfully assert the Howe reference does not teach a processor for directing the switching circuit to perform cut through routing. Applicants

respectfully assert the Howe reference does not teach cut through routing as recited in the independent Claims 1, 21, 31, 45 and 55. Furthermore, to the extent the Howe reference may mention cut through routing, Applicants respectfully assert the Howe reference teaches away from unscheduled cut through routing by indicating a reservation schedule is set up and scheduled packets are transmitted at a specific predetermined time [Col. 4 lines 27 – 45].

Applicants respectfully assert that Claims 2 – 10, 22 - 30, 32 - 40, and 46 – 47 are allowable as depending from allowable independent Claims 1, 21, 31, and 45 respectively.

With respect to Claim 21, the present Office Action alleges Howe teaches performing pre-emptive cut through routing over a virtual communication channel. To the extent the Howe reference may mention cut through routing, Applicants respectfully assert the Howe reference does not teach unscheduled cut through routing. In addition, Applicants respectfully assert the Howe reference teaches away from pre-emptive cut through routing by indicating a reservation schedule is set up and scheduled packets are transmitted at a specific predetermined time [Col. 4 lines 27 – 45]. Applicants also respectfully assert the Howe reference does not teach unscheduled cut through routing over a virtual communication channel.

With respect to Claim 31, the present Office Action alleges Howe teaches cut through routing [Col. 25 lines 12 –13 regarding request] and a communication path probe update [Col. 25 lines 13 –16 regarding accepting of the request] and upstream forwarding of the communication path probe update [Fig 9 wherein paths for control

messages are bi-directional]. To the extent the Howe reference may mention requesting a scheduled time across the layer on network, Applicants respectfully assert the Howe reference does not teach a processor for directing said switching circuit to perform cut through routing of a communication path probe and a communication path probe update. Applicants respectfully assert that a request for a scheduled time as mentioned in Howe does not teach a path probe. To the extent the Howe reference may mention accepting a request for scheduled time, Applicants respectfully assert the Howe reference does not teach a communication path probe update.

With respect to Claim 41, the present Office Action alleges Howe teaches a communication path recovery. To the extent the Howe reference may mention if a session is not established can retry [Fig 43], Applicants respectfully assert the Howe reference does not teach communication path recovery of an established communication path.

With respect to Claim 45, the present Office Action alleges Howe teaches utilizing information associated with a previously established communication path to establish a new communication path. To the extent the Howe reference may mention a reservation scheduler getting a reservation message checks a routing table to determine which input and output lines may be affected [Col. 36 lines 4 -20], Applicants respectfully assert the Howe reference does not teach utilizing information associated with a previously established communication path to establish a new communication path.

With respect to Claim 55, the present Office Action alleges Howe teaches establishing a communication path for communicating non-time sensitive information. To the extent the Howe reference may mention when a scheduled layer one event is over a device switches back to standard store and forward switching [Col. 4 lines 46-52], Applicants respectfully assert the Howe reference does not teach a processor for directing said switching circuit to perform cut through routing of a communication path probe utilized to establish a communication path for communicating non-time sensitive information.

With respect to Claims 2, 22, and 32 the present Office Action alleges Howe teaches a processor analyzes incoming information and determines if the incoming information has time sensitive characteristics. To the extent the Howe reference may mention a means to enable a layer one bypass connection for the transfer of incoming data and enable real-time or high-priority packets to bypass standard buffering means, Applicants respectfully assert Howe does not teach analyzing incoming information and determining if the incoming information has time sensitive characteristics.

With respect to Claim 10, 30, and 40, the present Office Action alleges the Howe reference teaches a buffer circuit for storing non-time sensitive information temporarily when directed by the processor where the information is forwarded according to queuing character. Applicants respectfully assert the Howe reference does not teach a time sensitive quality of service management method with cut through routing as claimed in the present application including buffer circuit for storing non-time sensitive information temporarily when directed by the processor where the information is forwarded according to queuing character.

With respect to Claim 26 the present Office Action alleges Howe teaches the time sensitive information pre-empts communication of other non-time sensitive information. To the extent the Howe reference may mention delaying, stopping or starting standard non-real time, non-high priority store and forward packets in the input and output buffers for the purposes of scheduling and switching layer one real-time or high priority packets [Col. 23, lines 21 – 31], Applicants respectfully assert the Howe reference does not teach cut through communication of time sensitive pre-empts information communication of other non-time sensitive information.

With respect to Claim 27 the present Office Action alleges Howe teaches virtual communication channeling is only utilized to communicate time sensitive information. To the extent the Howe reference may mention specific scheduled packets are transmitted [Col. 4, lines 37 – 42], Applicants respectfully assert the Howe reference does not teach virtual communication channel is only utilized to communicate time sensitive information.

With respect to Claim 37 the present Office Action alleges Howe teaches the path probe update includes information utilized to establish a communication path from a source to destination. To the extent the Howe reference may mention a "pure layer one" embodiment [Col 25 , lines 1 - 20], Applicants respectfully assert the Howe reference does not teach path probe update includes information utilized to establish a communication path from a source to destination.

With respect to Claim 43 and 44 the present Office Action alleges the Howe reference teaches analyzing if a communication link to a first network device is available and forwarding the information to a second network device if the first is unavailable. To the extent the Howe reference may mention LAN devices could communicate at a layer one level to other devices on the same layer one enabled LAN [Col. 26 lines 55 – 59], Applicants respectfully assert the Howe reference does not teach a processor analyzes if a communication link to a first network device is unavailable and forwards said information to a second network device if said communication link to a first network device is unavailable.

103 Rejections

Claims 3 – 9, 11 – 20, 23 – 25, 28, 29, 33 – 36, 38, 39, 42, and 46 – 54 are rejected in the above referenced Office Action, under 35 U.S.C. 103 (a) as being unpatentable over Howe in view of US Patent No. 6,173,331 to Shimonishi. Applicants respectfully assert that the present claimed invention is neither shown nor suggested by the Howe reference and Shimonishi reference, alone or together in combination.

With respect to Claim 3, 11, 20, 23, 33, 42, 46, 48, and 53, the present Office Action alleges Howe teaches the system discussed above regarding Claims 2, 22, 32, 41 and 45. Applicants respectfully assert the Howe reference does not teach the invention as claimed in Claims 2, 22, 32, 41 and 45 in accordance with the rationale discussed above. The present Office Action acknowledges the Howe reference does not teach a processor directs the system to drop the incoming information with time sensitive characteristics if the switching circuit cannot output the information within specified timing constraints.

Applicants respectfully assert the Shimonishi reference does not overcome these and other shortcomings of the Howe reference. To the extent the Shimonishi reference may mention detecting a virtual connection and a class of a received packet [Col.1 lines 27 –38], Applicants respectfully assert that the Shimonishi reference does not teach analyzing incoming information. In addition, to the extent the Shimonishi reference may mention a priority [Col 6 lines 27 –38], Applicants respectfully assert that the Shimonishi reference does not teach determining if the incoming information has time sensitive characteristics. The present Office Action also alleges the Shimonishi reference teaches a processor directs the system to drop the incoming information. To the extent the Shimonishi reference may mention discarding a received packet associated with minimizing the vacancy of the transmission medium [Col. 2 lines 1 - 15 –38], Applicants respectfully assert that the Shimonishi reference does not teach droping the incoming information with time sensitive characteristics if the switching circuit can not output the information within specified timing constraints according to the time sensitive characteristics. Applicants respectfully assert the present claimed invention focuses on the time sensitive characteristics of the information rather than the minimization of vacancy on the transmission medium.

Applicants respectfully assert that Claims 12 – 20 and 49 –54 are allowable as depending from allowable independent Claims 11 and 48.

With respect to Claims 4, 13, 24, 34 and 54 the present Office Action alleges the Howe reference teaches determining if the switching circuit is busy performing other switching operations within specified timing constraints. To the extent the Howe

reference may mention a request and event schedule [Fig. 3], Applicants respectfully assert the Howe reference does not teach a processor directs said time sensitive quality of service management system to drop said incoming information with time sensitive characteristics if said switching circuit is busy performing other switching operations.

With respect to Claims 5, 6, 16, 25, 35, and 36 the present Office Action alleges the Howe reference teaches directing a switch to forward time sensitive information upon receipt and analysis of the destination information. To the extent the Howe reference may mention inverting amplifiers [Col. 34 line 1 – line 67] and/or inserting source and destination addresses in a header, Applicants respectfully assert Howe does not teach directing a switch to forward time sensitive information upon receipt and analysis of the destination information.

With respect to Claim 7 the present Office Action alleges Howe teaches the system functions as an end use device. Applicants respectfully assert the Howe reference does not teach a time sensitive quality of service management system with cut through routing as claimed in the present application functions as an end use device.

With respect to Claims 8, 12, 28, 38 the present Office Action alleges Howe teaches the information and system is compatible with TCP/IP standards. Applicants respectfully assert the Howe reference does not teach a time sensitive quality of service management system and method with cut through routing as claimed in the present application is compatible with TCP/IP standards. In addition, Applicants respectfully assert the Howe reference does not teach a communication path probe is broadcast to

communicatively coupled neighboring intermediate network devices as claimed in newly amended Claim 38.

With respect to Claims 9, 17, 29, and 39 the present Office Action acknowledges the Howe reference does not teach that urgent information corresponds to a specific port. The present Office Action alleges Howe teaches data associated with urgent information applications which implicitly correspond to a particular timing device. To the extent the Howe reference may mention data associated with urgent information applicants, Applicants respectfully assert the Howe reference does not implicitly teach a particular timing device.

With respect to Claims 14, 15, and 49 the present Office Action alleges Howe teaches a cut through process is performed to resend information as soon as the header is received and analyzed. To the extent the Howe reference may mention a session retry [Fig 43] and header information may be used for call setup, Applicants respectfully assert Howe does not teach a cut through process is performed to resend information as soon as the header is received and analyzed. Applicants respectfully assert Howe teaches away from the present claimed interest by indicating a reservation schedule is set up and communicated at a predetermined time [Col. 4 lines 27 – 50].

With respect to Claim 18 the present Office Action alleges Howe teaches the time sensitive device is a real time device. Applicants respectfully assert the Howe reference does not teach a time sensitive quality of service management system as claimed in the present application including a real time device.

With respect to Claim 19 the present Office Action alleges Howe teaches a buffer for storing non time sensitive information. Applicants respectfully assert the Howe reference does not teach a time sensitive quality of service management system as claimed in the present application including a buffer for storing non time sensitive information.

With respect to Claim 47 the present Office Action alleges Howe teaches utilizing information associated with previously established communication paths to establish a new communication path. To the extent the Howe reference may mention a reservation scheduler getting a reservation message checks a routing table to determine which input and output lines may be affected [Col. 36 lines 4 -20], Applicants respectfully assert the Howe reference does not teach utilizing information associated with a previously established communication path to establish a new communication path.

With respect to Claim 50 and 52, the present Office Action alleges Howe teaches cut through routing [Col. 25 lines 12 –13 regarding request] and a communication path probe update [Col. 25 lines 13 –16 regarding accepting of the request] and upstream forwarding of the communication path probe update [Fig 9 wherein paths for control messages are bi-directional]. To the extent the Howe reference may mention requesting a scheduled time across the layer on network, Applicants respectfully assert the Howe reference does not teach a processor for directing said switching circuit to perform cut through routing of a communication path probe and a communication path probe update. Applicants respectfully assert that a request for a scheduled time as mentioned in Howe does not teach a path probe. To the extent the Howe reference may mention

accepting a request for scheduled time, Applicants respectfully assert the Howe reference does not teach a communication path probe update.

With respect to Claim 51 the present Office Action alleges Howe teaches the path probe update includes information utilized to establish a communication path from a source to destination. To the extent the Howe reference may mention a "pure layer one" embodiment [Col 25, lines 1 - 20], Applicants respectfully assert the Howe reference does not teach path probe update includes information utilized to establish a communication path from a source to destination.

Conclusion

In light of the above-listed remarks, Applicants respectfully request allowance of the remaining Claims. The examiner is urged to contact Applicants' undersigned representative if the Examiner believes such action would expedite resolution of the present Application.

Respectfully submitted,

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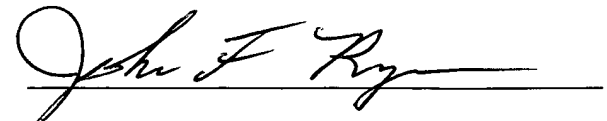
Date: 6/10, 2004



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